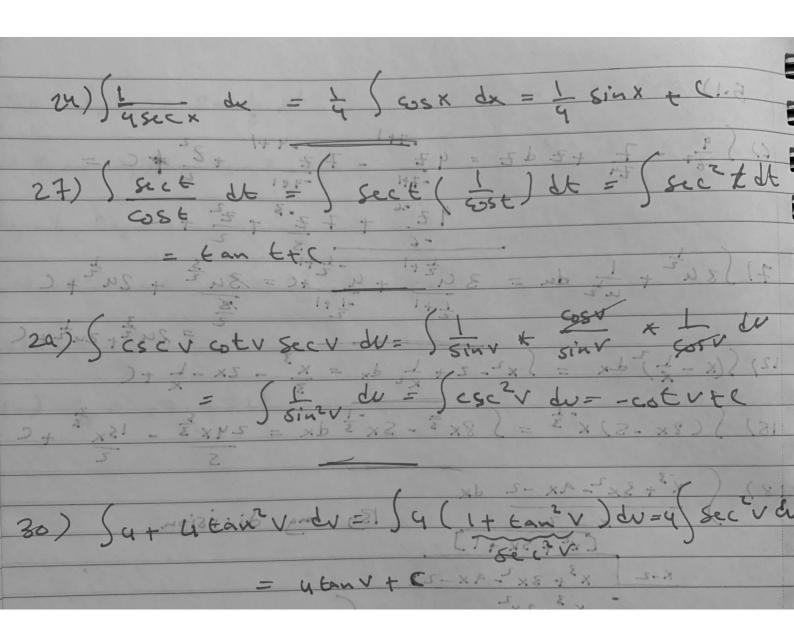
5.1)

6)
$$\begin{cases} \frac{q}{q} - \frac{7}{4} + \frac{7}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} + \frac{7}{4} \cdot \frac{1}{4} \cdot \frac{1$$



 $21) \int (\sqrt{x} + 3)^{4} dx \quad let \quad u = \sqrt{x} + 3$ => \ 2 u du - 2 u + c = 2 (\frac{1}{2}) + c 23) $\int \frac{t-2}{(t^2-4t+3)^3} dt = 7 \text{ let } u = t^2-ut+3$ $\int \frac{t}{(t^2-4t+3)^3} du = 2(t-2)$ $\int \frac{1}{2} \int \frac{1}{u^3} du = \frac{1}{2} \int \frac{1}{u^2-2} du = \frac{1}{$ 31) (cos 3x 3 sin 8x dx let a = sin 3x =>1\int 3\int a \, \text{du} = \frac{1}{3}\int \frac{1}{3}\in = (8in 3x)3+C3 (Sin x + cosx)2 dx = Ssin2x + 2 sin x cosx + 55x dx Sin 2x = 25ix cosx 1 + Sin 2x dx = Sidx + Ssin 2x dx =) x + 1) sin u du du = du = 2 dx = x - 1 cos 2x + c = du = dx

Sin 4x = | Sin 2(2x) = 2x | Sin 20 = 2sin 04 Sin 20 = 25in 065 28in 2x 52x dx = /2sin 2x dx Scuzdu = - u3 + C du = - sin x dx = - (1+6)5x)3+C Sinx dx let u= asxdx du= - Sinxdx
-du= sinxdx = - \(\frac{1}{u^4} \, \du = \frac{1}{3u^3} \, \frac{1}{3cos^3 \times} \, \frac{1}{3cos^3 \times} \) 38) Ssinzx Sec 2x dx - Ssin zx Sec 2x Sec 2x de = Sinzx Seczx dx = (tan zx Seczx seczx) =>) see 2x (ton2x Sic2x) dx u= Sec 2x du = 2 Sic2x ton2x dx = 1 Su du = 1 uy + C = (sec2x) + C

 $\frac{\cos t}{(1-\sin t)^2} dt = 7 \quad c = 1-\sin t$ = tan(3x-4)+(dx = Csc2 2xdx (standa = 12 + 6 = (Secsx)2 + 6

44)) tanyx * I dx =) cot 4x csc4x dx u=4x dn=4 dx 1 | set acscy du = 1 (- csc(4x)) + C 46)) x cos (x2) dx (x=x2 du= 2x dr = 1 (sec (u) dn = 1 tan x2+ C 1 Cotucsca du Zdu=dx = 1 (-cotx2)+C (48) $\int Sec(\frac{x}{3}) tan(\frac{x}{3}) dx$ $u = \frac{x}{3} dn = 1$ 3 du = dx=>3 \ Secutanu de = 3 sec \(\frac{x}{3} + C